

Yn(a)
~~INTERACTIVE WAGERING SYSTEMS AND
METHODS WITH PARIMUTUEL POOL FEATURES~~

This application claims the benefit of U.S. 5 provisional application No. 60/194,852, filed April 5, 2000, which is hereby incorporated by reference herein in its entirety.

Background of the Invention

This invention relates to systems and methods 10 for interactive wagering. More particularly, this invention relates to systems and methods for determining the effect of proposed wagers on parimutuel pools so that users of interactive wagering systems can determine whether or not to place a wager based on the 15 effects.

Wagering on sporting events such as horse, dog, and harness racing is a popular leisure activity. However, it is sometimes inconvenient to attend racing events in person. Not all racing fans have sufficient 20 time to visit race tracks as often as they would like and some fans have difficulty in obtaining suitable transportation to the track. Thus, there is a need for wagering services for fans who cannot attend racing events in person.

25 Off-track betting establishments, which are generally more readily accessible than race tracks,

have attempted to fill this need. However, racing fans who desire to place a wager still face the prospect of traveling to the off-track betting establishment.

Wagering via telephone is another option. A 5 user of a telephone-based system typically sets up a telephone account against which wagers may be made. In order to place wagers, the user must interact with a computerized telephone ordering system. This type of system is mainly used for placing wagers. Detailed 10 racing information is typically obtained from other sources, such as printed racing programs.

Wagering via a television set-top box is still another option. As described in Brenner et al. 15 United States Patent 5,830,068, which is hereby incorporated by reference herein in its entirety, known systems enable a user to receive wagering information and place wagers using a television set-top box in a user's home.

Wagering via computer is yet another option. 20 Using a computer, a user can similarly receive wagering information and place wagers from the user's home. Interactive wagering systems, in any incarnation, have gained widespread popularity due to the ease of use for the user.

25 A form of wagering called parimutuel wagering exists in which all money wagered in a race is pooled and divided up among those who have winning tickets, after deductions such as statutory commissions and taxes are made. Therefore, the odds in parimutuel 30 pools are determined by the sums wagered by participants. For example, in a parimutuel pool for a horse race, the odds on a horse are determined by the

sums of money wagered on the horse relative to the total sum of money in the parimutuel pool.

It would therefore be desirable to provide systems and methods for interactive wagering that allow 5 a user to see the effect of placing wagers on parimutuel pools in advance of actually placing the wagers.

Summary of the Invention

In accordance with the principles of the 10 invention, systems and methods for interactive wagering may be provided that allow a user to see the effect of placing wagers on parimutuel pools in advance of actually placing the wagers.

Interactive wagering systems and methods that 15 allow a user to see the effect of placing a wager on parimutuel pools may comprise a wagering data hub that controls the flow of data that is related to wagers, wagering events, and wagering accounts which include associated parimutuel pools. In order to access this 20 data, a user of the present invention may use a television set-top box, a computer, a telephone, and/or any other suitable device.

When a user builds a wager associated with a 25 parimutuel pool using a suitable device, the wager amount and parimutuel pool information may be used to determine what effect the user's wager has on the user's potential winnings before placing the wager. The effects determined can be made and provided to the user before the user finalizes the wager, such that the 30 user may be informed about a possible result of the wager before the wager is finalized.

Brief Description of the Drawings

The above and other advantages of the present invention will be apparent upon consideration of the following detailed description, taken in conjunction 5 with the accompanying drawings, in which like reference characters refer to like parts throughout, and in which:

FIG. 1 is a block diagram of a wagering system constructed in accordance with one embodiment of 10 the present invention;

FIG. 2 is a block diagram of a wagering data hub suitable for use with the wagering system of FIG. 1;

FIG. 3A is a block diagram of a subscriber 15 management system suitable for use with the wagering system of FIG. 1;

FIG. 3B is a block diagram of a set-top box and related equipment suitable for use with the wagering system of FIG. 1;

FIGS. 4-5 are illustrations of display 20 screens through which a user may initiate wagering on a set-top box or computer interface in accordance with one embodiment of the present invention;

FIGS. 6-7 are illustrations of main menu 25 display screens that may be presented in a set-top box or computer interface in accordance with one embodiment of the present invention;

FIG. 8 is a flow diagram illustrating a 30 proBET mode that may be presented in a set-top box or computer interface in accordance with one embodiment of the present invention;

FIGS. 9-15 are illustrations of display screens that may be presented as part of the ProBET

mode in a set-top box or computer interface in accordance with one embodiment of the present invention;

FIG. 16 is a block diagram of a wagering system constructed in accordance with one embodiment of the present invention;

FIG. 17A is a flow diagram illustrating a process that allows users to see what projected effect proposed wagers may have on parimutuel pools in accordance with one embodiment of the present invention;

FIG. 17B is a flow diagram illustrating a process that may be used to determine what projected effects proposed wagers may have on parimutuel pools in accordance with one embodiment of the present invention;

FIG. 18 is an illustration of a display screen that may be presented as part of the ProBET mode in a set-top box or computer interface in accordance with one embodiment of the present invention; and

FIG. 19 is a flow diagram illustrating a process that may be used to provide users with projected effects of proposed wagers on a user interface implemented on telephones in accordance with one embodiment of the present invention.

Detailed Description of the Invention

One embodiment of an interactive wagering system 100 in accordance with the present invention is shown in FIG. 1. As illustrated, system 100 includes a wagering data hub 102 that controls wagering in system 100 and that may be coupled to one or more television set-top boxes 104, one or more user telephones 106, and

one or more user computers 108. Using any set-top box 104, telephone 106, or computer 108 coupled to hub 102, a user of the present invention can receive information regarding wagering events and wagering accounts, and

5 place wagers related to those wagering events. The wagering data hub 102 may also be connected to a subscriber management system 110, one or more television distribution systems 112, one or more tote companies 114, one or more racing data providers 116,

10 and one or more handicapping data providers 118.

Turning first to set-top boxes 104, in accordance with the present invention, set-top boxes 104 may be any suitable devices for receiving data signals and video signals, processing the data signals, and displaying at least a portion of the data signals and the video signals, and receiving user commands that cause data signals to be transmitted to wagering data hub 102. For example, set-top boxes 104 may be conventional set-top boxes, may be circuitry in video cassette recorders, digital video disc players, or televisions, or may be any other suitable devices.

As can be seen from FIG. 1, set-top boxes 104 may receive data signals from hub 102 via communication link 132, television distribution system 112, and communication link 128. These data signals preferably include data relating to wagering events and wagering accounts. Alternatively or additionally to receiving the data signals via link 132, system 112, and link 128, these signals may be received via communication link 138.

Set-top boxes 104 may receive video signals from a video production system 120 via communication link 134, television distribution system 112, and

communication link 130. These video signals preferably include video relating to wagering events that originate at race tracks 122 and 124 and are transmitted to video production system 120 via satellite 126. Alternatively or additionally to receiving video signals via link 134, system 112, and link 130, video signals may be received from video production system 120 via communication link 140, hub 102, and link 138. Although links 128 and 130 are illustrated as separate paths for transmitting signals, each link may be part of a single communication mechanism. For example, link 128 may transmit signals in the vertical blanking interval of a video signal carried in link 130.

Set-top boxes 104 may transmit wagering data signals to wagering data hub 102 via communication link 136, television distribution system 112, and communication link 142 and/or via communication link 138. Communication link 138 is preferably a telephone connection, although any suitable connection (such as an Internet connection, etc.) could also be used. The signals received and transmitted by set-top box 104 may be any suitable type of analog and/or digital signals that are transmitted using any suitable method.

Television distribution system 112 and communication links 128, 130, 132, 134, 136, and 142 are preferably all part of a cable television system, although each may be part of any suitable communication system or combination of communication systems, such as satellite television systems, over-the-air television systems (including RF, microwave, etc.), and computer networks (e.g., the Internet). Similarly to links 128 and 130, link 136 may be incorporated with either or

both of links 128 and 130 as part of a single communication mechanism if desired, and links 132 and 142 may be incorporated together as part of a single communication mechanism if desired.

5 User telephones 106 preferably connect to hub 102 via telephone line 144, although any suitable mechanism for connecting user telephones 106 to hub 102 may also be used. Although user telephones 106 are illustrated as standard telephones, any type of device
10 for receiving audio prompts that may be heard by a user and for responding to those prompts (either by spoken word or key depression) may also be used. In addition, user telephone 106 may include video displays that show video relating to wagering events that originate at race tracks 122 and 124. The video displays may be
15 touch screens that accept user input.

 User computers 108 preferably connect to hub 102 via computer network 146. Computer network 146 may be any suitable mechanism for connecting a computer
20 to hub 102, such as a direct telephone connection, one or more telephone connections and a data network connection (such as an Internet connection or a connection provided by computer network provider), or a direct data network connection.

25 Subscriber management system 110 enables the operator of the present invention to control access by users to the services provided by hub 102. In addition to being connected to hub 102 by communication link 148, subscriber management system is also connected to
30 tote companies 114 via communication link 150. Communication links 148 and 150 may be any suitable mechanism for communicating data and may use any type of data transmission method. The connection to tote

companies 114 enables subscriber management system 110 to create and update wagering accounts that are located at tote companies 114. In preferred embodiments of the present invention, when a wager is placed by a user 5 using one of set-top boxes 104, telephones 106, and computers 108, hub 102 accesses subscriber management system 110 to verify that the wager is authorized. One embodiment of a subscriber management system 110 is described further below in connection with FIG. 3A.

10 As stated above, tote companies 114, racing data providers 116, and handicapping data providers 118 may be connected to hub 102 via communication links 150, 152, and 154, respectively. Tote companies 114 preferably provide wagering event data and account 15 information to hub 102, and receive wager information from hub 102. Racing data providers 116 and handicapping data providers 118 preferably provide statistical and handicapping data to hub 102. As shown, tote companies 114 and racing data providers 116 20 typically receive data from race tracks 122 and 124 via communication links 158, while handicapping data providers typically receive data from one or more of racing data providers 116 via communication link 156. The data received from and transmitted to tote 25 companies 114, racing data providers 116, and handicapping data providers 118 may be transmitted over links 150, 152, and 154 using any suitable method, and these communication links may be any suitable mechanisms for transmitting that data. Similarly, 30 communication links 156 and 158 may be any suitable mechanism for transmitting data that use any suitable method.

Turning additionally to FIG. 2, wagering data hub 102 (FIG. 1) is illustrated in further detail. As shown, hub 102 includes a data distribution system 202, a database 204, a set-top server (non-telco) 206, a 5 set-top server (telco) 208, an interactive voice response (IVR) server 210, a personal computer (PC) server 212, a modem bank 214, and interface circuitry 216. Data distribution system 202 and database 204 work in conjunction with each other to receive, store, 10 and provide racing statistical and handicapping data from and to other components in system 100 of the present invention. As illustrated, racing data may be received from tote companies 114 (via interface circuitry 216) and racing data providers 116, and 15 handicapping data may be received from handicapping data providers 118. This racing and handicapping data may then be provided to set-top servers 206 and 208, IVR server 210, and PC server 212.

Set-top server (non-telco) 206 may provide 20 data and video signals to, and receive data signals from, set-top terminals 104 via television distribution system 112. Set-top server (telco) 208 may provide data and video signals to, and receive data signals from, set-top terminals 104 via modem bank 214 and 25 communication link 138. To coordinate the data sent between servers 206 and 208, hub 102 may incorporate a link 218 between the servers, or the servers may be consolidated into a single mechanism.

Interactive voice response server 210 may 30 provide interactive voice prompts to telephones 106 via link 144. These prompts may be a menu of actual or simulated voice options to which a user can respond by speaking or depressing a button on one of telephones

106. Through these prompts, server 210 may provide account information and racing and handicapping data, including information about various races, horses, jockeys, odds, etc. Through these responses, server 5 210 may receive wager data.

PC server 212 may provide data and video signals to, and receive data signals from, computers 108 via modem bank 214 and link 146 or through link 146 alone. When computers 108 access server 212 via a 10 telephone line, the computers preferably use bank 214 and link 146. When computers 108 use a computer network connection (such as the Internet) to access server 212, the computers preferably bypass modem bank 214.

15 In order to authorize and submit wagers, each of servers 206, 208, 210, and 212 preferably provide data to and receive data from tote companies 114 (via interface circuitry 216 and link 150) and subscriber management system 110 (via link 148). For example, 20 when a user requests to place a wager via any of these servers, the corresponding server may send an authorization request to either subscriber management system (SMS) 110 or one of tote companies 114. When the request is sent to a tote company 114, the server 25 may select the desired tote company from among several available tote companies. In response to that request, the SMS 110 or tote 114 may reply with an authorization. The server may then send the wager to the tote company (if not already completed).

30 Similarly, to notify the users of the status or history of their accounts or to credit those accounts with additional funds or winnings, account information and money transfer information may be

transmitted to and received from the tote or SMS. For example, using a user interface from one of a set-top box 104, telephone 106, or computer 108, a user may authorize additional funds to be transferred from the 5 user's bank or credit card account when the available funds in the user's account drop below a desired level.

In some embodiments of the present invention, video signals are provided to set-top boxes 104 by servers 206 and/or 208, and to computers 108 by server 10 212. These signals are preferably received at the servers from video production system 120 by link 140.

One embodiment of a subscriber management system (SMS) 110 in accordance with the present invention is illustrated in FIG. 3A. As shown, SMS 110 15 may include a subscriber database 302, an interface computer 304, one or more customer service stations 306, one or more remote customer service stations 308, and one or more tote company administration stations 310. Subscriber database 302 stores information 20 regarding each user's account. This data may include current balance, past wagering history, individual wagering limits, personal identification numbers, billing addresses, credit card numbers, bank account numbers, social security numbers, etc. The data in 25 database 302 may be accessed by hub 102 (FIG. 1) using interface computer 304. In some embodiments of the present invention, interface computer 304 may be omitted and hub 102 may access database 302 directly.

Stations 306 and 308 preferably enable the 30 operator of system 100 (FIG. 1) to oversee and control the usage of the system by the users. Tote company administration stations 310 enable the operators of system 100 to create and update accounts for users at

the tote companies 114 (FIG. 1). Subscriber database 302 and interface computer 304 may be any suitable devices for storing data and accessing the data base, respectively. Each of stations 306, 308, 5 and 310 may be any suitable computers for accessing database 302 and tote companies 114.

Although wagering data hub 102 and subscriber management system 110 are illustrated as separate systems and may be located at separate facilities, it 10 should be noted that hub 102 and system 110 may be combined into a single system at a single location, or may be further split apart into finer sub-units at remotely connected locations.

As shown in FIGS. 1-3B, by centralizing the 15 storage of race and handicapping data in database 204 and account information in database 302, the present invention provides a more cost-efficient and centralized interactive wagering system that may be accessed by users using a variety of methods. For 20 example, a user may access race and handicapping data from home using a set-top box 104 in order to consider a wager to be made. Later, that user may place that wager using a cellular telephone while away from his or home. Finally, from the user's office, the user can 25 then use his or her PC to check the status of the wager to determine if the user won. In this way, a user may access any of his or her accounts using any of the interfaces provided in the interactive wagering system. Alternatively, for example, wagering enthusiasts who do 30 not have access to a set-top box 104 or a computer 108 may still receive race, handicapping, and account information and place wagers using the IVR interface accessible using telephones 106.

An illustration of a set-top box 104 (FIG. 1) and related components is shown in FIG. 3B. As can be seen, set-top box 104 may be connected to television distribution system 112 by links 128, 130, and 136.

5 Set-top box 104 may also be connected to a telephone network by link 138. Through these connections, set-top box 104 is able to communicate with wagering data hub 102 (FIG. 1). In order to control set-top box 104, a remote control 352, a keyboard 354 (e.g., an infrared 10 keyboard), and/or a pointing device 356 may also be provided. Additionally, set-top box 104 may be connected to a videocassette recorder 360 (or any other suitable television appliance) and/or a television 362, and any other local equipment 364 (such as a personal 15 computer that is connected to a cable modem in set-top box 104). In order to control a videocassette recorder 360, an infrared transmitter (or any other suitable control interface, such as an RS-232 interface) may also be provided.

20 Set-top box 104 may include tuning, communications, and display circuitry 366, a modem 368, a receiver 370, control circuitry 372, a data port 374, indicators 376, and memory 378. Tuning, communications, and display circuitry 366 may be any 25 suitable circuitry for receiving, splitting, combining, and/or distributing video and data signals to and from the television distribution system 112, control circuitry 372, memory 378, videocassette recorder 360, and television 362. Modem 368 may be any suitable 30 device for communicating data with a telephone network. Receiver 370 may be any suitable device for receiving signals from keyboard 354. Control circuitry 372 may be any suitable device, such as a microprocessor,

microcontroller, dedicated logic, a computer, etc., for controlling the functionality of set-top box 104. Data port 374 may be any suitable interface for communicating with local equipment 364. Indicators 376
5 may be any suitable devices for indicating events and statuses to a user, including light-emitting diodes, displays, audio systems, etc. Finally, memory 378 may be any suitable storage device or devices for storing data, including random access memory, flash memory, a
10 disk drive, etc.

During operation, control circuitry 372 will preferably execute instructions stored in memory 378. Through these instructions, the control circuitry will control the flow of video and data through circuitry
15 366, control the flow of data through modem 368, receiver 370, data port 374, and infrared transmitter 358, and drive indicators 376. More particularly, these instructions may cause a user interface as described below to be implemented on television 362.

20 A variety of user interfaces can be provided at set-top boxes 104, telephones 106, and computers 108 (FIG. 1) in accordance with the present invention. One embodiment of a user interface that may be implemented on set-top boxes 104 and computers 108, for example, is
25 illustrated in FIGS. 4-15 and FIG. 18. Although specific combinations of features are illustrated in these figures, any subset of these features and many additional features could be implemented in accordance with the present invention. Also, although the
30 illustrated embodiment of the user interface is directed to wagering on horse racing, it should be noted that this user interface could be modified for any type of wagering event.

Turning first to FIGS. 4 and 5, two examples of methods for accessing the user interface are shown. As illustrated in FIG. 4, the user interface could be accessible from the main menu 400 of an interactive television program guide. In addition to listing menu options for displaying information about television programs and for performing other functions, such a menu could include a menu option 402 that, when selected, would initiate the user interface.

10 Additionally or alternatively, as illustrated in FIG. 5, the user interface could be initiated using a prompt 502 that appears on top of a user television program 500. This prompt could appear on top of any television program (for example, when triggered by the start of a race for which a wager has been placed (as explained below)) or could appear on top of wagering event programs only when those programs are selected for viewing (for example, when triggered by a signal in the vertical blanking interval of a program or by an attached program guide). Also illustrated in FIG. 5, is a banner 504 that indicates that the user has tuned to the "TVG" channel and that channel is currently showing horse racing. Although illustrated in FIG. 5, banner 504 is optional.

25 Once the user interface has been initiated, one of the main menus in FIGS. 6 or 7 is displayed. As illustrated in FIG. 6, an initial main menu 608 is displayed in screen 600. Initial main menu 608 is preferably only presented when the user interface is 30 used for the first time. The initial main menu 608 may also be displayed when the user interface detects that the user is making many mistakes, or at any other suitable time. At all other times, normal main menu

702 shown in FIG. 7 is displayed when the user activates the user interface.

As shown, screen 600 also includes a status bar 601 that includes an operator icon 602, a current function indicator 604, and a clock 606. As will be illustrated in other figures that follow, status bar 601 may include other pieces of information as well. Operator icon 602 indicates to the user that "TVG" is the operator of system 100 (FIG. 1). Function indicator 604 indicates to the user that he or she is currently in the main menu. As the user moves through different menus, function indicator 604 preferably changes to indicate the current function being used.

Initial main menu 608 includes a "Tour TVG" option 610, a "How To Open Account" option 612, a "Player Setup" option 614, and a "Watch TVG" option 616. Any of these options (or any of the options in the subsequent menus) may be selected by using a remote control to reposition the highlight that is illustrated around option 610 to a desired option and to select that option. Alternatively, any other suitable method for selecting the menu options (such as using a computer mouse or keyboard) may be used in accordance with the present invention.

Turning to the options, "Tour TVG" option 610 preferably causes a tutorial of the features and operation of the user interface to be presented to the user. This tutorial could be presented in any method known in the art. Similarly, "How To Open Account" option 612 preferably causes instructions to be presented to the user that instruct him or her how to open an account for wagering. These instructions may additionally enable the user to actually open an

account using the user interface or may require the user to contact the operator directly (for example, by calling a "1-800" telephone number). "Player Setup" option 614 enables the user to access the player setup 5 submenu. The player setup submenu is discussed further in connection with FIGS. 109-118 below. Finally, "Watch TVG" option 616 causes the user interface to terminate and a wagering television channel (or any other suitable channel) to be displayed as illustrated 10 in FIG. 5.

FIG. 7 illustrates normal main menu 702 in screen 700. As shown, menu 702 includes a "ProBET" option 704, a "Build-A-Bet" option 706, a "Handicapping" option 708, a "Track Information" option 15 710, a "Player Information" option 712, a "Setup" option 714, and a "Watch TVG" option 716.

When a user selects "ProBET" option 704 from menu 702 or menu 718, series 800 of display screens 900-1500 and 1800 (FIGS. 9-15 and FIG. 18) illustrated 20 in FIG. 8 can be accessed. For example, when a user selects option 704, screen 900 is displayed as shown in FIG. 9. As can be seen, in screen 900, current function indicator 604 indicates that the user is currently operating in the "ProBET" menu function. In 25 this mode, a selection window 902 is first displayed. Window 902 includes an action indicator 904 that indicates to the user the next action that must be taken. In this case, the user is required to select a track for the bet. To do so, the user is presented 30 with track option indicator 906 and a series of track options 908. The user interface then waits for the user to select one of options 908. In FIG. 9, it can

be seen that the user has highlighted "CD" which is an abbreviation for "Churchill Downs."

Once the user has selected a track, screen 1000 is displayed as shown in FIG. 10. As illustrated, 5 status bar 601 now includes a track indicator 1002 that indicates that the user has selected "Churchill Downs." Similarly, track options 908 next to track option indicator 906 have changed their appearance so that all of options 908 except for track option 1004 (the 10 selected track option) are light in color and track option 1004 is dark in color. Further, to indicate the track selection, a ticket window 1006 in screen 1000 shows a track indication 1008 that preferably uses the same abbreviation as that selection from track options 15 908.

In screen 1000, the user is required to select one of race choices 1010 as indicated by race choice indicator 1012. As can be seen, the left-most choice 1010 is indicated as "MRB." This is a "multi- 20 race bet" choice that requires selections from multiple races. Next to the right-most choice 1010 is an arrow 1014 that indicates that other race choices 1010 are available by scrolling to the right of the right-most choice.

25 Once the user has selected a race, screen 1100 is displayed as shown in FIG. 11. As can be seen, the user's selection of race 2 in screen 1000 (FIG. 10) is indicated in a race countdown 1102 in status bar 601, in the display colors of race options 1010, and in 30 race indication 1104 of ticket window 1006. Similarly to selecting the race, the user is next required in screen 1100 to select the type of bet (or wager). Next to a type indicator 1106, a series of type options 1108

are displayed. Arrow 1110 indicates that additional options 1108 are available. Choices "EXA," "EXB," "TRI," "TRB," "WIN," "PLC," and "SHW" indicate the common horse racing bet types "exacta," "exacta-box," 5 "trifecta," "trifecta-box," "win," "place," and "show," respectively.

Turning to FIG. 12, it can be seen that the user has selected "trifecta" from type indicator 1202 in ticket window 1006 of screen 1200. Because the user 10 has selected a "trifecta" race type, three place selections (i.e., 1st, 2nd, and 3rd) must be selected by the user. If the user had selected a "win" race type, for example, then only a single place selection would be required. In response to place choices 1204, 15 the user is then required to select at least one first place choice, at least one second place choice, and at least one third place choice, each from the corresponding row of choices 1204.

After the user has selected the place 20 choices, screen 1300 is displayed as illustrated in FIG. 13. As shown, the user has selected one first place choice (choice "5"), one second place choice (choice "2"), and three third place choices (choices "3", "4", and "6"). Because of these last three 25 choices, the user is in effect placing three wagers: one for choices "5", "2", and "3"; one for choices "5", "2", and "4"; and one for choices "5", "2", and "6". At this point, the user interface requires the user to 30 select a per bet amount from one of amount choices 1302. As the user moves the highlight to select each one of the choices 1302, the total bet amount indicated in ticket window is preferably updated.

Finally, once the user has selected the bet amount from screen 1300, the user is presented with screen 1400 as shown in FIG. 14 to confirm the bet by selecting "OK" icon 1402 before the bet is placed in a 5 bet queue. The user interface then proceeds to screen 1500 shown in FIG. 15.

As illustrated in FIG. 15, screen 1500 includes queue window 1502. Queue window 1502 includes bet queue 1508, user options 1504, action indicator 10 1506, and total bet indicator 1510. From bet queue 1508, the user can see all of his or her previously placed, but unsent bets. Total bet indicator 1510 indicates to the user the total amount of the bets waiting to be sent. Also shown in window 1502 is odds 15 window 1512. If an unsent bet in a race is highlighted by the user, for example, the Churchill Downs bet shown in race 1514, the odds for that wager are displayed in odds window 1512. Odds window 1512 displays that horse "1" has 7-to-1 odds to win. By selecting one of 15 user options 1504, the user can indicate to the user interface how to proceed with the bets shown in bet queue 1508. For example, by selecting the "New" option 1504, the user can add another bet. By selecting the "Dup" option 1504, the user can duplicate a bet. By 20 selecting the "Send" option 1504, the user can send the bets to the tote company which finalizes them and places them into racetrack pools. By selecting the "Del" option 1504, the user can delete a bet and by selecting the "Menu" option 1504, the user can access a 25 drop down menu. As the user scrolls through each of options 1504, the user interface updates action indicator 1506 to indicate what will happen if the 30 selection is selected.

Once the user has built or proposed a wager, the interactive wagering system can proceed to determine what effects the user's proposed wager would have on parimutuel pools that are associated with the 5 user's proposed wager. With reference now to FIG. 16, the projected effects can be determined by computer wagering system 1604, IVR control system 1606, wagering data hub 1602, TV wagering system 1608, or any other suitable equipment with data processing circuitry or by 10 software that has access to the user's wager settings.

FIG. 16 shows some components of interactive wagering system 100 that may be used to determine what effects the user's wager may have on associated parimutuel pools. The data that may be required to. 15 determine the effects of the user's wager may be stored in computer wagering system 1604, IVR control system 1606, wagering data hub 1602, TV wagering system 1608, or any other suitable devices with data storage facilities which are part of interactive wagering 20 system 100 illustratively shown in FIG. 1. Data signals may be communicated between these devices as shown in FIGS. 1-3.

The data required to determine what effect the user's wager would have on associated pools may 25 include parameters of the user's proposed wager such as the race track, wager type, wager amount, current odds, and current size of the parimutuel pool (the amount of money wagered for that wager in that race) that is associated with the user selected race or races as 30 shown in data storage block 1610. Once the projected effects of the user's proposed wager on associated parimutuel pools have been determined, the projected effects may be presented to the user with devices such

as computer 1612, telephone 1614, television set-top box 1616, or any other suitable user device. These devices are coupled to each other and other parts of interactive wagering system 100 as shown in FIG. 1.

5 FIG. 17A shows process 1700 for an interactive wagering system which allows a user to see the projected effect of the user's proposed wager on parimutuel pools. Process 1700 starts at step 1702, then receives user's input at step 1704. Information 10 is preferably obtained, based on user's input, that affect winnings, such as odds, pool size, and size of wagers on other horses at step 1706. The projected effect of user's proposed wager on associated parimutuel pools is determined at step 1708, and the 15 projected effects are displayed at step 1710. Whether the user's wager is final is preferably determined at step 1712, before the process ends at step 1714. If the user's wager is not final, process 1700 is repeated, starting at step 1704.

20 For a win wager, where the user picks a horse to finish in first place at one race track, the user receives winnings which are proportional to the user's proposed wager amount and odds. FIG. 17B shows process 1700 for determining the projected effect of 25 the odds on a win wager based on the proposed new wager by the user.

FIG. 17B shows process 1716 starting at step 1718 and receiving user input for building the user's wagers, such as wager amount, race track, race, 30 and wager type at step 1720. The process continues at step 1722 when data such as odds and pool size associated with the user selected race track are determined. The pool can be the total amount of money

wagered by all users for the same wager type on the same race less any amount deducted by race track service providers. At step 1724, the user's proposed wager amount is added to the win pool to get new pool 5 result, " X_T ." At step 1726, the user's wager mount is added to wagers the same horse to get the result, " X_1 ." In order to determine odds for each horse entered in the race, the amounts wagered thus far on each horse is divided by the new pool, " X_T ", to get projected odds for 10 each horse at step 1728. The projected odds may then be displayed at step 1730 before the wager is finalized in step 1732. When process 1716 ends at step 1734, the projected odds may be stored in computer wagering system 1604, IVR control system 1606, wagering data hub 15 1602, TV wagering system 1608, or any other suitable equipment with data storage facilities.

Steps 1724 and 1726 are interchangeable in order of occurrence in process 1716. For a win wager on a race, process 1716 can be repeated each time with 20 different proposed wager amounts, so that the user can get projected new odds for different proposed wager amounts.

In addition to win wagers, the user may obtain projected odds for other types of wagers such as 25 for wagers such as place, show, exacta, quinella, trifecta, superfecta, daily double, pick 3, pick 4, pick 6, or any type of wager for which there is at least one associated parimutuel pool. The user can find the projected effects of different proposed wagers 30 (amount, number of horses, etc.) on parimutuel pools associated with the wager type.

Turning back to FIG. 15, projected odds may be displayed in an odds window. As shown in FIGS. 15

and 18, odds window 1512 may be selected to toggle between showing the odds for the race, the odds prior to the user placing the wager ("Old Odds"), and showing the projected odds ("New Odds") for the race based on 5 the user placing a wager that the user has created. In another embodiment of the present invention, the user may access projected odds by using the user input device, instead of toggling odds window 1512. For example, if the user input device is a remote control, 10 there may be a button that the user can press in order to display projected odds in odds window 1512. In yet another embodiment of the present invention, projected future odds may appear in another odds window called "New Odds" alongside odds window 1512 which may display 15 "Old Odds."

FIG. 18 shows "New Odds" which are determined by taking into account the projected effects of the user's proposed wager. In a parimutuel pool which is relatively small compared to the user's proposed wager, 20 the effect of the user's proposed wager is to decrease the odds for horses selected by the user. FIGS. 15 and 18 show a trifecta wager which has been placed by the user. When odds window 1812 shows the "New Odds" for the horses of highlighted race 1814, the odds for 25 horses numbered 2, 3, 4, and 5 in the highlighted race have decreased. The user's potential winnings on a horse originates from wagers on other horses. The odds on a horse is proportionate to the ratio of the wagers on other horses to the wagers on that horse. When a 30 user places a large bet on a horse, or group of horses, the ratio of the wagers on other horses to the wagers on that horse, or group of horses, decreases, thereby causing the odds on the horse, or group of horses, to

substantially decrease. The substantially decreased odds may simply mean that the expected return on the proposed wager, if successful, will also substantially decrease, as reflected in odds window 1812 of FIG. 18.

5 If the user is dissatisfied with the projected odds of wagers, the user can change or delete the wagers. For every new wager that is placed, odds window 1812 can be toggled to show either "Old Odds" or "New Odds" for a proposed wager that is highlighted.

10 As can be seen from FIG. 8, if the user selects the "New" option, the user interface will return the user to screen 1100 of FIG. 11. At this point, the user interface will use the track and race selections chosen by the user in making the previous wager. If the user

15 would like to change those selections, the user may move the highlight up to choices 1010 (FIG. 10) or options 908 (FIG. 9).

 If the user selects the "Dup", "Del", or "Menu" options, the user interface will enable the user to duplicate a bet, delete a bet, or access a drop down menu, respectively. If the user is satisfied with a bet, the user can select the "Send" option, then the user interface will enable the user to finalize a bet. After the user has finalized the wager, the interactive wagering system may update odds window 1512 to show the actual odds associated with the user's wager. These odds may be different in value from the "New Odds" shown to the user for reasons such as simultaneous wagering of other users on the interactive wagering system.

 Projected odds based on proposed wagers associated with parimutuel pools can also be provided to the user with a user interface based on

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telephones 106 or computers 108. FIG. 19 shows process 1900 starting at step 1902 which allows a user to build a wager at step 1904 with parameters such as wager amount, race track, race, and wager type. The 5 user may be prompted for the parameters and may respond by pressing telephone buttons, by pressing keys on a keyboard, by voice, or by touch screen display.

FIG. 19 also shows that the interactive wagering system may calculate the projected odds based on the user's tentative wager at step 1906. The calculation may be performed by IVR control system 1606, by wagering data hub 1602, by computer wagering control system 1604, by any other suitable equipment with data processing circuitry or by software that has access to the user's wager settings. The user interface may then present the user with projected odds in step 1908, by announcing them to the user, or by showing them in a display. If desired, the size of pools associated with the proposed wager may also be displayed. The user can choose to repeat the projected odds in step 1910, or proceed to finalize the wager in step 1912. The wager may then be sent in step 1914 to wagering data hub 102.

Projected odds may be displayed on a telephone (cellular telephone, land-based telephone, etc.), a computer monitor, or a personal digital assistant using display screens such as the display screen of FIG. 19. Cellular phone based interactive wagering systems are described in Zaring et al. United States Patent Application No. 09/516,736, filed March 1, 2000, which is hereby incorporated by reference herein in its entirety. However, the display screen may vary to suit the display capabilities of the

telephone, computer monitor, or personal digital assistant.

Thus systems and methods for interactive wagering for providing the projected effects of 5 proposed or unsent wagers on parimutuel pools are described. One skilled in the art will appreciate that the present invention may be practiced by other than the described embodiments, which are presented for purposes of illustration and not of limitation, and the 10 present invention is limited only by the claims that follow.

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